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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>05/05/2008</u>.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-26</u> is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-26</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All b) ☐ Some * c) ☐ None of:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. _____.
    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
       application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   This office action is responsive to communications filed on 05/05/2008.

Claims 1-26 are pending and have been examined.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

05/05/2008 has been entered.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

4.   Claims **1, 4-9, 12-14 and 23-26** are rejected under 35 U.S.C 102 (e) as being

anticipated by **Ankireddipally et al. (Patent no.: US 6,772,216 B1).**

        With respect to **claim 1,** Ankireddipally teaches a computer-implemented

communication method, comprising:

providing one or more requests for acknowledgement in an asynchronous

request message transmitted from an application-level of a sender system

(Ankireddipally: fig. 8, col. 18, lines 10-57), wherein each request for acknowledgement

corresponds to at least one event related to the request message (Ankireddipally: col.

19, lines 1-39), the asynchronous request message for enterprise application-level

processing of the asynchronous request message at a receiver system (Ankireddipally:

fig. 8, col. 18, lines 43-57), the request message being in a format in accordance with

extensible markup language format (Ankireddipally: col. 17, lines 48-50)

transmitting the request message with the one or more requests for

acknowledgement to the receiver system, the receiver system being an enterprise

system providing services, the request to request one or more of the services of the

receiver system to process the asynchronous request message (Ankireddipally: fig. 8,

col. 18, lines 10-57), and the transmitting the request message comprising transmitting

the request message in an exchange infrastructure for communication among

components of collaborative business systems (Ankireddipally: fig. 1, commerce

exchance server 10), the components comprising the sender system and the receiving

system; and

receiving an acknowledgment message responsive to the request message, the

acknowledgement message being an application-level message sent by the receiver

system of the request message (Ankireddipally: fig. 8, col. 18, lines 43-57), the

acknowledgement message being in a format in accordance with extensible markup

language format, the acknowledgement message sent to the sender system of the

request message (Ankireddipally: col. 17, lines 48-50), and the acknowledgement

message characterizing one or more states from application states comprising:

> a state indicating the request message was processed correctly in an
> application of the receiver system (Ankireddipally: col. 19, lines 1-23),

> a state indicating the request message processed with error in the
> application of the receiver system,

> a state indicating processing of the request message canceled after error
> (Ankireddipally: col. 18, lines 58-65),

> a state indicating a system error occurred during processing of the request
> message (Ankireddipally: col. 20, lines 9-24), and

> a state indicating an outbound adapter of the receiver system does not
> support application acknowledgments (Ankireddipally: col. 18, lines 58-67).

With respect to **claim 4**, Ankireddipally teaches the method in accordance with

claim 1, wherein the event includes a system error during transport of the request

message to the receiver system (Ankireddipally: col. 18, lines 58-67, and col. 20, lines

9-24).

With respect to **claim 5,** Ankireddipally teaches the method in accordance with

claim 1, wherein the event includes the receipt of the request message by the receiver

system (Ankireddipally: col. 19, lines 10-23).

With respect to **claim 6,** Ankireddipally teaches the method in accordance with

claim 1, wherein the event includes the successful processing of the request message

by an application associated with the receiver system (Ankireddipally: col. 18, line 64 to col. 19, line 23).

With respect to **claim 7,** Ankireddipally teaches the method in accordance with claim 1, wherein the event includes the erroneous processing of the request message by an application associated with the receiver system (Ankireddipally: col. 20, lines 9-24).

With respect to **claim 8,** Ankireddipally teaches the method in accordance with claim 1, further comprising generating the acknowledgement message upon completion of the event (Ankireddipally: col. 19, lines 1-39).

With respect to **claim 9,** Ankireddipally teaches the method in accordance with claim 8, further comprising transmitting the acknowledgement message to the sender system (Ankireddipally: fig 6-9, col. 20, lines 9-24).

In regard to **claim 12** the limitations of this claim are substantially the same as those in claim 1. Therefore the same rationale for rejecting claim 1 is used to reject claim 12. By this rationale **claim 12** is rejected.

With respect to **claim 13,** Ankireddipally teaches the method in accordance with claim 12, wherein the event corresponds to one or more events selected from the event group that consists of:

the receipt of the asynchronous request message by the receiver system (Ankireddipally: col. 19, lines 10-23);

a system error during transport of the request message to the receiver system;

the successful processing of the request message; and/or

the erroneous processing of the request message (Ankireddipally: col. 20, lines

9-24).

With respect to **claim 14,** Ankireddipally teaches the method in accordance with

claim 12, wherein the asynchronous acknowledgement message is generated by the

receiver system, and further comprising receiving the asynchronous acknowledgement

message from the receiver system (Ankireddipally: fig 6-9, col. 18, lines 43-57).

With respect to **claim 23**, Ankireddipally teaches the method in accordance with

claim 1, wherein the asynchronous request message comprises a plurality of requests

comprising a first request for acknowledgement of a state of processing of the

asynchronous request message at a software application of the receiver system and

each of the requests is to result in a separate acknowledgment message

(Ankireddipally: fig. 6-9, col. 19, lines 1-39).

With respect to **claim 24**, Ankireddipally teaches the method in accordance with

claim 23, wherein the first request is a request for acknowledgement of whether the

software application failed to process the message (Ankireddipally: fig. 6-9, col. 19, lines

1-39).

With respect to **claim 25**, Ankireddipally teaches the method in accordance with

claim 1, wherein the components are web-based applications (Ankireddipally: fig. 15-16,

col. 20, lines 28-41).

With respect to **claim 26,** Ankireddipally teaches the method in accordance with claim 1, wherein the transmitting of the asynchronous request message is initiated by an outbound proxy call to an exchange engine to transmit the asynchronous request message to an exchange infrastructure server (Ankireddipally: fig. 2, col. 18, lines 10-57), the exchange infrastructure stores duplicates of the asynchronous request message for reexecution in case of error (Ankireddipally: fig. 1, col. 12 line 64 to col. 13 line 9 and col. 20, lines 9-24), and application of the sender system that causes the call of the outbound proxy continues processing information other than the asynchronous request message without an acknowledgment from the receiver system of status of the call (Ankireddipally: col. 18, lines 43-57, noted that the requesting party continues to process other tasks.).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.

      3.   Resolving the level of ordinary skill in the pertinent art.
      4.   Considering objective evidence present in the application indicating
             obviousness or nonobviousness.

7.   Claims 2-3 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable

over **Ankireddipally et al. (Patent no.: US 6,772,216 B1)** in view of **Frymier (Patent**

no.: US 5,604,487).

     With respect to **claims 2 and 3**, Ankireddipally teaches all of the claimed

limitations except that he does not explicitly teach a method of requesting an

acknowledgement includes setting a flag in a header of the request message.

     In the same field of endeavor, Frymier teaches a method of setting a flag in a

header of the asynchronous request message (Frymier, col. 31, lines 42-49, noted the

'more data' flag).

     Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of the invention to incorporate the method of setting a 'more data' flag in the

header of the asynchronous request message as taught by Frymier in Ankireddipally's

invention in order to notifying the receiver system that there are more data packets

follow.

     With respect to **claim 17**, Ankireddipally teaches all of the claimed limitations

except that he does not explicitly teach a method of reading a flag in a header of the

asynchronous request message.

In the same field of endeavor, Frymier teaches a method of reading a flag in a header of the asynchronous request message (Frymier, col. 31, lines 42-49, noted the 'more data' flag).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of reading a 'more data' flag in the header of the asynchronous request message as taught by Frymier in Ankireddipally's invention in order to notifying the receiver system that there are more data packets follow.

In regard to **claim 18** the limitations of this claim are substantially the same as those in claim 17. Therefore the same rationale for rejecting claim 17 is used to reject claim 18. By this rationale **claim 18** is rejected.

8.   Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Ankireddipally et al. (Patent no.: US 6,772,216 B1)** in view of **Ho et al. (PGPUB: US 2003/0135640 A1)**

With respect to **claim 10,** Ankireddipally teaches the method in accordance with claim 1, further comprising: transmitting an acknowledgement message related to each request for acknowledgement through network components (Ankireddipally: col. 18, lines 43-57).

However, Ankireddipally does not explicitly teach a method of generating a hoplist that includes a list of network components through which the request message is transmitted and transmitting an acknowledgement message related to each request for

acknowledgement through network components corresponding to the hoplist.

In the same field of endeavor, Ho teaches a method of generating a hoplist that includes a list of network components through which the request message is transmitted and transmitting an acknowledgement message related to each request for acknowledgement through network components corresponding to the hoplist (Ho, fig. 7 and page 5, paragraph 41).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of generating a hoplist as taught by Ho in Ankireddipally's invention in order to effectively and properly transmits the acknowledgement message to the network components.

9.   Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Ankireddipally et al. (Patent no.: US 6,772,216 B1)** in view of **Wilhelmsson (Patent no.: US 5,654,969).**

With respect to **claim 11,** Ankireddipally teaches the method in accordance with claim 1, further comprising:

a request message that is transmitted to one or more receiver systems (Ankireddipally: fig. 6-9, col. 18, lines 9-57), wherein each child message includes the one or more requests for acknowledgement (Ankireddipally: fig. 6-9, col. 18, 43-57); and receiving an acknowledgement message related to event associated with each child message (Ankireddipally: fig. 6-9, col. 19, lines 1-39).

However, Ankireddipally does not explicitly teach a method of splitting, at one or

more network components between the sender system and the receiver system, a

request message that is transmitted to one or more receiver systems into two or child

messages.

In the same field of endeavor, Wilhelmsson teaches a method of splitting, at one

or more network components between the sender system and the receiver system, a

request message that is transmitted to one or more receiver systems into two or child

messages (Wilhelmsson, col. 7 lines 63-67).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of the invention to incorporate the method of dividing the request message into

number of data frames and transmitting them from a sender to a receiver system as

taught by Wilhelmsson in Ankireddipally's invention in order to minimize the load on the

transmission channels.

10.   Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable

over **Ankireddipally et al. (Patent no.: US 6,772,216 B1)** in view of **Rivadalla et al.

(Patent no.: US 6,857,023 B2).**

With respect to **claims 15 and 16**, Ankireddipally teaches all the claimed

limitations, except that he does not explicitly teach a method of matching and comparing

the reference of the asynchronous acknowledgement message to a message ID of a

copy of the asynchronous request message.

In the same field of endeavor, Rivadalla teaches a method of matching and

comparing the reference of the asynchronous acknowledgement message to a

message ID of a copy of the asynchronous request message (Rivadalla, col. 7, lines 6-14).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of comparing the sequence number of the frames as taught by Rivadalla in the Ankireddipally's invention in order to ensure that each data frames are acknowledged by the receiver system.

11.   Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ankireddipally et al. (Patent no.: US 6,772,216 B1)** in view of **Bunce et al. (publication no.: US 2003/0163589 A1).**

With respect to **claim 19**, Ankireddipally teaches a system for asynchronous communication between a sender system and a receiver system, comprising:

a forward transportation module for transmitting asynchronous request messages from the sender system to the receiver system, the asynchronous request messages being enterprise application-level messages (Ankireddipally: fig. 1-2 & 18, col. 11, lines 24-40, col. 15, lines 12-57 and col. 18, lines 10-57); and

a backward transportation module for transmitting asynchronous acknowledgement messages from the receiver system to the sender system, wherein each acknowledgement message includes a reference to a request message and a result of an event associated with the request message (Ankireddipally: fig. 1-2 & 18, col. 15, lines 12-57 and col. 18, lines 10-57, col. 19, lines 1-39), the asynchronous acknowledgement messages characterizing one or more states from application states

comprising:

a state indicating an asynchronous request message was processed correctly in an application of the receiver system (Ankireddipally: col. 19, lines 1-23),

a state indicating the asynchronous request message processed with error in the application of the receiver system,

a state indicating processing of the asynchronous request message canceled after error (Ankireddipally: col. 18, lines 58-65),

a state indicating a system error occurred during processing of the asynchronous request message (Ankireddipally: col. 20, lines 9-24), and

a state indicating an outbound adapter of the receiver system does not support application acknowledgments (Ankireddipally: col. 18, lines 58-67).

However, Ankireddipally does not explicitly teach a method of pipelining a transportation module for processing packets in the network element.

In the same field of endeavor, Bunce teaches pipeline processing the packets in the network element (Bunce, page 1 paragraph 7 and page 2, paragraph 21).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method pipelined packet processing at the network element as taught by Bunce in the Ankireddipally's invention in order to provide a dynamic allocation of processors in processing tasks to maximize efficient processing resource allocation and reduces pipeline imbalance, and ensuring a flexible solution and maximal throughput in packet processing (Bunce, page 1, paragraph 7).

With respect to **claim 20**, Ankireddipally teaches the system in accordance with

claim 19, further comprising an enterprise application integrator hosted on a server, and

wherein the forward transportation module includes a first HTTP connection from the

sender system to the server and a second HTTP connection from the server to the

receiver system (Ankireddipally: fig. 15, col. 20, lines 28-66).

However, Ankireddipally does not explicitly teach a method of pipelining a

transportation module for processing packets in the network element.

In the same field of endeavor, Bunce teaches pipeline processing the packets in

the network element (Bunce, page 1 paragraph 7 and page 2, paragraph 21). Same

motivation used in claim 19 applies equally as well to claim 20.

With respect to **claim 21**, Ankireddipally teaches the system in accordance with

claim 19, wherein the backward transportation module includes a first HTTP connection

from the receiver system to the server and a second HTTP connection from the server

to the sender system (Ankireddipally: fig. 15, col. 20, lines 28-66).

However, Ankireddipally does not explicitly teach a method of pipelining a

transportation module for processing packets in the network element.

In the same field of endeavor, Bunce teaches pipeline processing the packets in

the network element (Bunce, page 1 paragraph 7 and page 2, paragraph 21). Same

motivation used in claim 19 applies equally as well to claim 21.

With respect to **claim 22**, Ankireddipally teaches the system in accordance with

claim 19, further comprising a database associated with the forward and backward

pipelines, for storing a copy of each transmitted request message and each transmitted

acknowledgement message Ankireddipally: fig. 1, col. 12 line 64 to col. 13 line 9 and

col. 20, lines 9-24).

Response to Arguments

12.   Applicant's arguments with respect to claims 1-26 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

13.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Lin Liu whose telephone number is (571) 270-1447.

The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm, EST.

    If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. L./
/Lin Liu/

Examiner, Art Unit 2145

/Jason D Cardone/
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